Thermophysical Property Databases from NIST

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One function of the National Institute of Standards and Technology (NIST) is the development and dissemination of standard reference databases for the thermophysical properties of industrially important fluids and fluid mixtures. We will demonstrate six computerized PC databases developed by the Physical and Chemical Properties Division that are distributed by the Standard Reference Data (SRD) Program of NIST. These databases are:

- SRD #4 (NIST SUPERTRAPP): a predictive package for hydrocarbon systems up to C24;
- SRD #10 (NIST/ASME Steam): an implementation of the current international standards for water and steam properties;
- SRD #12 (NIST12 or NIST Fluids): a pure fluid database with recommended high accuracy equations of state for key fluids;
- SRD #14 (NIST14): an accurate evaluated mixture program for properties of natural gas mixtures;
- SRD #23 (NIST REFPROP): a database for the properties of refrigerants and their mixtures;
- SRD #72: (NIST72): thermophysical properties of air and air component mixtures.

These databases provide thermodynamic and transport properties over a wide range of temperatures, pressures and compositions.